JUSTIFICATION AND APPROVAL
FOR A LIMITED SOURCE AWARD UNDER A FEDERAL SUPPLY SCHEDULE

1. <u>Contracting Activity</u>:   Department of Veterans Affairs (VA)
                                   Office of Acquisition Operations
                                   Technology Acquisition Center
                                   260 Industrial Way West
                                   Eatontown, NJ 07724

2. <u>Description of Action</u>: This proposed action is for a hybrid delivery order, consisting of Firm-Fixed Price (FFP) and Time and Materials (T&M) Line items issued under the General Services Administration (GSA) Information Technology Federal Supply Schedule (FSS) Number 70 for enterprise license renewal and maintenance as well as upgrade of Statistical Analysis Services (SAS) Institute Inc. software supporting the Veterans Informatics and Computing Infrastructure (VINCI) program at the Austin Information Technology Center (AITC) Austin, Texas. This is a sole source order with Executive Information Systems, LLC. (EIS), located at 6901 Rockledge Dr Ste 600, Bethesda, MD. The period of performance for license renewal, support services and maintenance is twelve (12) months.

3. <u>Description of the Supplies or Services</u>: The VINCI program is a partnership between the VA Office of Information Technology (OIT) and the Veterans Health Administration Office of Research and Development. VINCI provides the storage and server technologies to securely host suites of databases integrated from select national data. Researchers access the data along with the tools for reporting and analysis in a secure, virtual working environment. SAS Grid is part of the VINCI program mission to provide custom software tools to be used by researchers within VINCI's secure computing environments. The most extensively used analytical software is the SAS analytical products that have been installed on VINCI since 2009. This software is used by researchers and others for complex analysis of data to support research and operations. SAS Grid is licensed by seat/user typically for 12 months at a time and that license includes use of the software and support as required per installation. Maintenance of the licenses is required to continue to offer the software for use and to receive upgrades and support. This proposed action also includes implementation support services for VINCI to migrate their current Microsoft operating system based SAS Grid to the Linux platform. These services include configuration, architectural design, application analysis, and installation services.

4. <u>Authority</u>: Federal Acquisition Regulation (FAR) Part 8.405-6(a)(1)(i)(B), Only one source is capable of providing the supplies or services required at the level of quality required because the supplies or services are unique or highly specialized.

5. <u>Rationale Supporting Use of Authority Cited Above:</u> VA has one of the largest patient record data sets for medical research in the United States and is considered as a leader in medical research. VA requires SAS brand name software for the following reasons. First, VA requires tools that enable its researchers the ability to analyze and extract meaningful information from extremely large data sets, which in the VA environment, reach the five terabyte mark. No statistical package software other than SAS has the performance and capability for handling the vast amounts of data required by VA, nor has sufficient support to ensure VA the required availability and reliability of the SAS Grid. While there are currently some open source products available, such as the products discussed in the market research section of this document, that claim to have similar capabilities, the Government has determined that these products cannot provide the Government with the required capabilities of availability, reliability or product support. Addtionally, the VINCI environment contains a large body of code written in the SAS proprietary language/code. As this code will not run in other software environments except SAS enabled enviroments, there are not any equivalent products available. The proposed software also contains the only tools required to provide a secure, enterprise wide infrastructure while also providing a comprehensive analytics solution encompassing all of the following: basic and advanced statistics, data mining, predictive modeling, data visualization, forecasting, rapid model creation, deployment and management, optimizations research, quality improvement and data quality. These requirements allow the VA research community to be able to analyze all of VA's patient records, most of which are text based. These capabilities assist researchers by allowing researchers to perform their analysis and draw conclusions based on the output provided by this tool, unique to SAS.

VA requires the unique software capabilities, as outlined below, that only SAS brand software can meet. Only SAS brand name software can provide capabilites such as production of repeatable code that is easily documented and verified for compliance and other Information Security Officer (ISO) related issues; multiple imputations for missing values; and a comprehensive, integrated platform for Bayesian and Frequentist modeling. The production of repeatable code addresses trends within the publishing industry to have authors submit documented code for external, independent validation. Other statistical packages lag behind in this trend and will inhibit VA's ability to comply with the needs of the medical journals and publishing communities. The Government's requirement for a comprehensive, integrated platform for Bayesian and Frequentist modeling, offered by SAS, is a feature that is unrivaled in other statistical packages currently in the market. Bayesian modeling and inference for generalized linear models, accelerated life failure models, Cox regression models and piecewise exponential models are available in one package where other software applications require the use of multiple often incongruent applications. General procedure fits Bayesian models with arbitrary priors and likelihood functions. Additionally, SAS offers multiple imputations for missing values (i.e., Regression and propensity scoring for monotone missing patterns; Markov Chain

Monte Carlo (MCMC) simulation procedure that is designed to fit Bayesian models method for arbitrary missing patterns and the ability to combine results for statistically valid inferences). These out-of-the-box features cannot be found together in any other statistical package on the market. Finally, SAS software gives VINCI the ability to support the large number of current VINCI researchers while still allowing the environment to grow incrementally when extra capacity is needed. The SAS software environment also allows additional capacity (servers) to be added with no interruption in service. SAS software allows for multiple servers to be taken offline for maintenance and upgrades while allowing users continuous access to the environment. The procurement of the software renewal includes the annual maintenance.

Currently, VINCI is employing the SAS Grid under a Microsoft operating system. At this time, VINCI is executing a program strategy to migrate to open source systems and toolsets. While SAS products have been developed to work on either the Microsoft operating system or the LINUX operating system, VINCI has opted to migrate to the LINUX operating system to keep with its program goals, as LINUX is an open source operating system, and additionally, the SAS customer base is largely utilizing Linux operating systems. As a result, VINCI requires product implementation services for migration and implementation of the SAS Grid and SAS modules on the LINUX platform. Given that the SAS code is proprietary, as discussed in previous paragraphs above, only SAS or its authorized resellers may provide these implementation services.

6. Efforts to Obtain Competition: Market research was conducted, details of which are in the market research section of this document in paragraph 8 below. There is no competition anticipated for this effort. Additionally, in accordance with FAR 5.3, the contract award will be synopsized on the Federal Business Opportunities (FBO) website. In addition, this J&A will be made publicly available on FBO.

7. Actions to Increase Competition: In order to remove or overcome barriers to competition in future acquisitions for this requirement, the agency will work with the program office to perform additional market research so that other solutions can be considered.

8. Market Research: Market research efforts were conducted by VA technical experts from VINCI in December 2012 and revalidated in February 2013. The market research included review of various websites and trade publications and discussions with data managers and researchers in VA to ascertain if there are other similar items that can meet the Government's requirements. Specifically, VA technical experts from VINCI researched software from Statistical Package for the Social Sciences, Stata and R, Oracle, and Informatica; however, none of these software packages offer interoperability and code compatibility with the current VINCI platform and do not meet all of VA's functional needs as described in the previous

paragraphs. This software only offers a limited array of analytics and none offer a grid-enabled high-performance computing environment, which is crucial to meeting the Government's requirements. Based on this market research, it was determined that only SAS software can meet all of the Governments requirements. EIS is the only authorized reseller of SAS software and maintenance. At the time of the writing of this Justification, there have been no new entrants to the marketplace that can provide these services.

9. <u>Other Facts</u>: None